Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

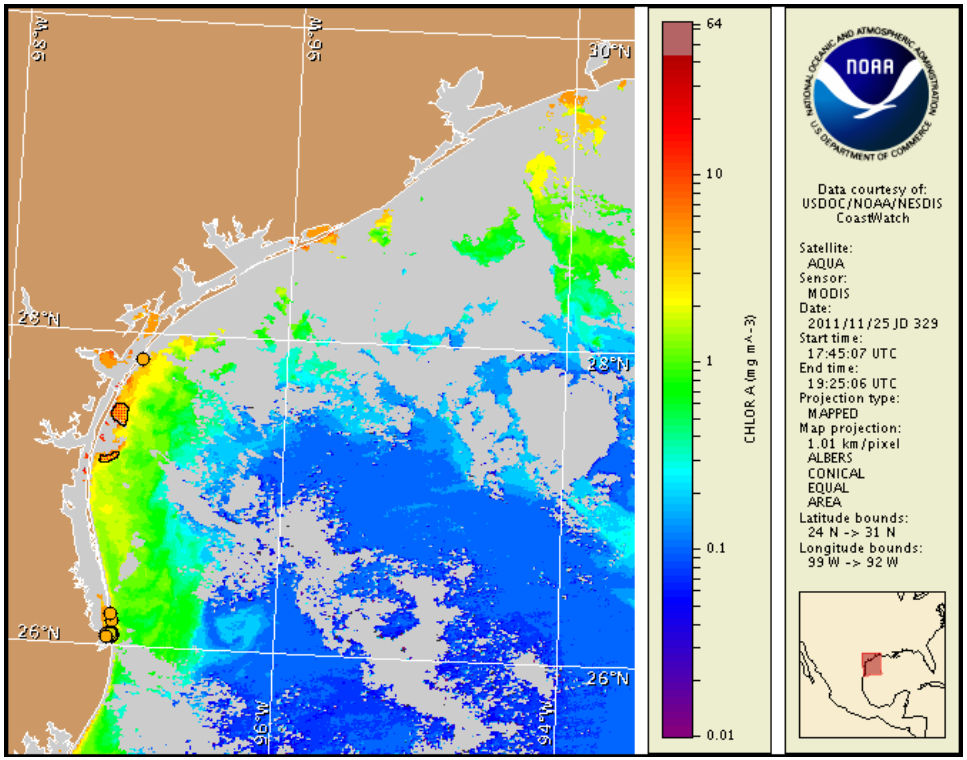
Monday, 28 November 2011

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Wednesday, November 23, 2011



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from November 18 to 28 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive: http://tidesandcurrents.noaa.gov/hab/bulletins.html

Conditions Report

A harmful algal bloom is present along the Texas coast in the Aransas Pass area and within Corpus Christi Bay, alongshore the South Padre Island region, and within the lower Laguna Madre. Patchy high impacts are expected today through Wednesday within the lower Laguna Madre. Patchy moderate impacts are possible Monday through Wednesday in the Port Aransas/Corpus Christi region and Tuesday through Wednesday along South Padre Island. Patchy very low impacts are possible on Monday in the South Padre Island region. Harmful algal blooms were last identified in the Galveston/Freeport area on November 17, alongshore the Matagorda Peninsula, within Matagorda Bay, and alongshore Padre Island National Seashore on November 7, and within the Brownsville Ship Channel on November 15. Associated respiratory impacts remain possible in these areas. No additional impacts are expected at the coast in Texas today through Wednesday, November 30. Over the past few days, respiratory impacts have been reported in the Padre National Seashore Island region.

Analysis

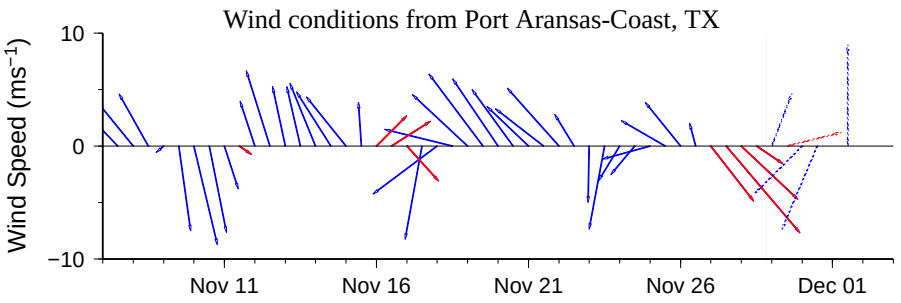
A harmful algal bloom is present along the Texas coast in the Aransas Pass area and within Corpus Christi Bay, alongshore the South Padre Island region, and within the lower Laguna Madre. Harmful algal blooms were last identified in the Galveston/Freeport area on November 17, alongshore the Matagorda Peninsula, within Matagorda Bay, and alongshore Padre Island National Seashore on November 7, and within the Brownsville Ship Channel on November 15.

No new samples have been received from along the Texas coast. In the Galveston and Matagorda Bay regions, the latest samples indicated 'low a' to 'low b' *Karenia brevis* concentrations in northwest Galveston Bay (11/17; TPWD), and 'low b' to 'high' concentrations within Matagorda Bay (11/1-7; TPWD). The most recent samples from the Aransas/Corpus Christi Bay region, indicated 'medium' concentrations at the UTMSI pier on the Gulf-side of Aransas Pass (11/21-23; TPWD), and 'low a' to 'high' concentrations within Aransas Bay (11/14; TPWD). Along the Padre Island National Seashore, the last samples received indicated 'low b' to 'medium' concentrations of *K. brevis* (11/7; TPWD). Public reports of respiratory irritation were received over the weekend alongshore Padre Island National Seashore (11/26-27; TPWD). Sampling is recommended in this area. The latest samples from the South Padre Island region, indicated 'low b' to 'medium' concentrations along the Gulf coast of South Padre Island and within Brazos-Santiago Pass (11/14-22; TPWD), 'low a' to 'high' concentrations within the lower Laguna Madre (11/14-22; TPWD), and 'medium' concentrations within the Brownsville Ship Channel at the San Martin boat ramp (11/15; TPWD).

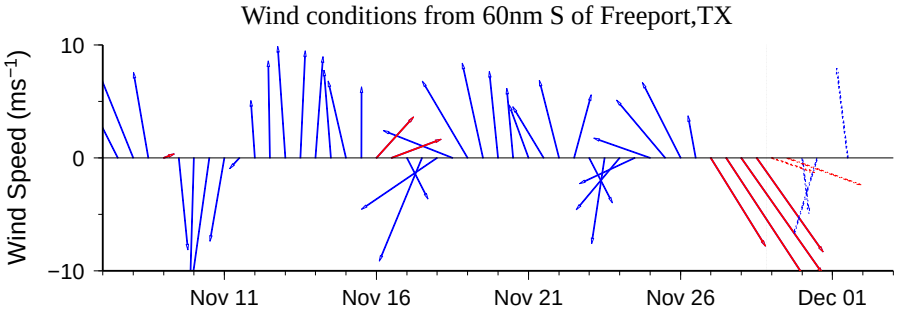
Satellite imagery has been obscured by clouds over the past few days, limiting analysis. MODIS imagery from 11/25 (page 1) is partially obscured by clouds from Sabine Pass to the Port Aransas region. Patches of elevated to high chlorophyll (2 to 13μg/L) are visible along- and offshore south of Port Aransas, with patches of elevated chlorophyll (2 to <10μg/L) visible in the Sabine Pass, Matagorda Island, and South Padre Island regions, and along the coast approximately 50 km south of the Rio Grande region. Elevated chlorophyll at the coast may contain *K. brevis* but could also be due to the continued resuspension of benthic chlorophyll and sediments, making it difficult to determine the extent of blooms from satellite imagery alone.

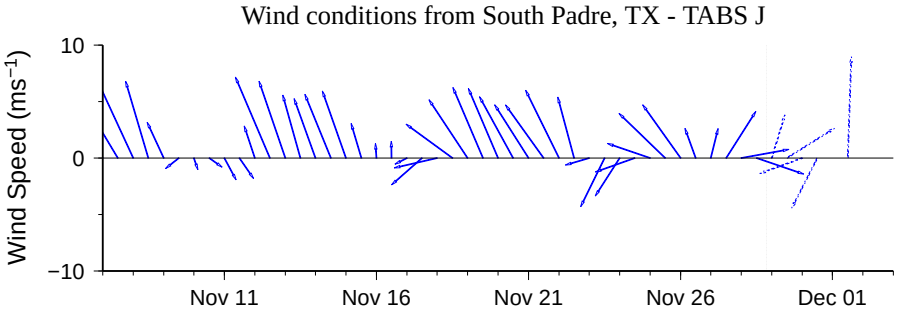
Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 50 km north from the Galveston Bay region, 15 km north from the Matagorda Peninsula region, 30 km south from the Port Aransas region, >150 km south along the Padre Island National Seashore, and >150 km south from Brazos Santiago Pass from November 25 to December 1. Onshore winds over the next several days will increase the potential for impacts along the Texas coastline.

Kavanaugh, Derner



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



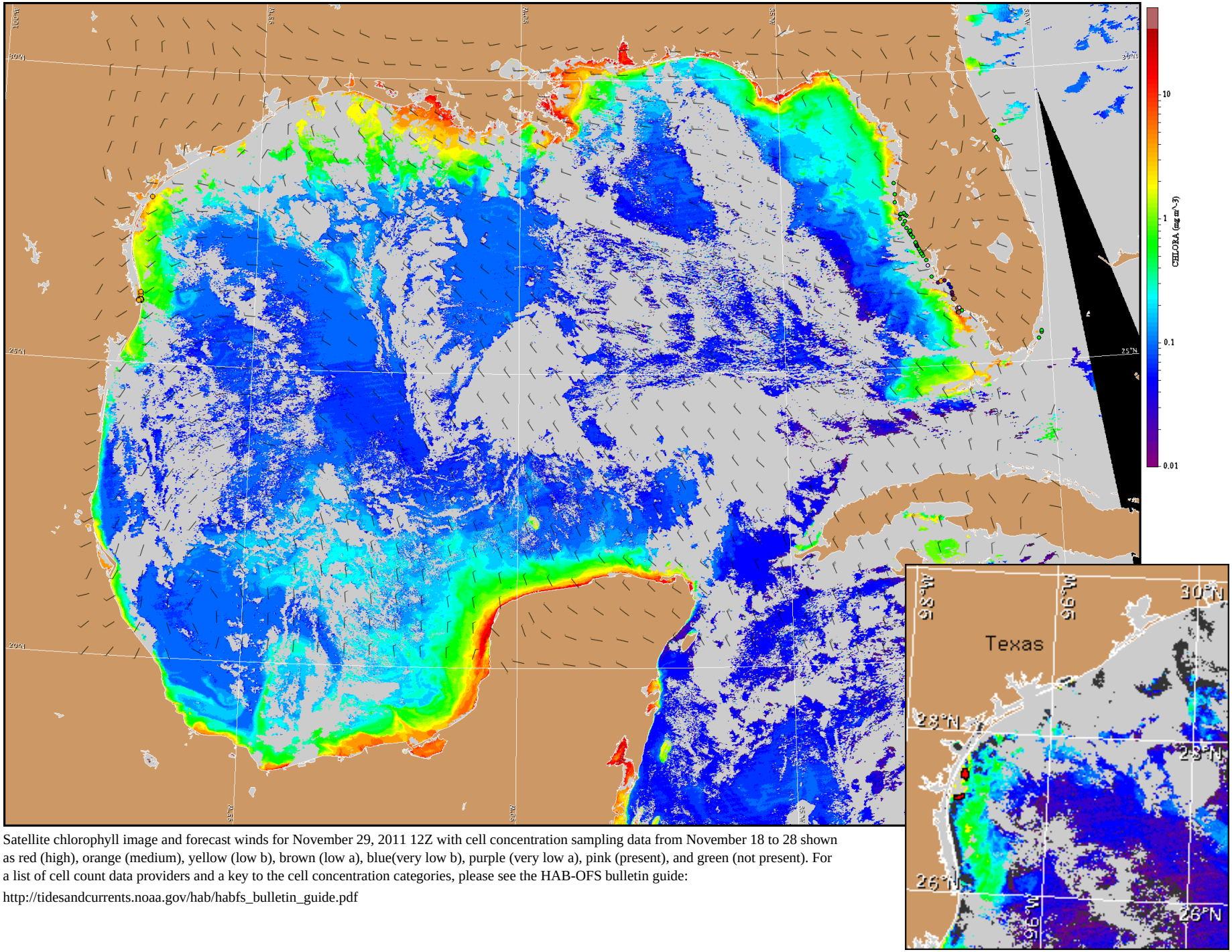


Wind Analysis

Galveston/Freeport: Northwest winds (5-20 kn, 3-10 m/s) today. North winds (10-20 kn, 5-10 m/s) Tuesday through Wednesday becoming northeast winds (10-15 kn, 5-8 m/s) Wednesday afternoon. Southeast winds (10-15 kn) Wednesday night.

Port Aransas: Northwest winds (5-15 kn, 3-8 m/s) today becoming southwest to west winds (5-10 kn, 3-5 m/s) tonight. Northwest winds (10-15 kn) Tuesday shifting northeast in the afternoon. North winds (10-20 kn) Tuesday night through Wednesday becoming northeast winds (5-10 kn) in the afternoon.

South Padre: West winds (15 kn, 8 m/s) today becoming southwest winds (10 kn, 5 m/s) tonight. Northwest winds (10 kn) Tuesday becoming north winds (10-15 kn) through Tuesday night. East winds (10 kn) Wednesday.



Satellite chlorophyll image and forecast winds for November 29, 2011 12Z with cell concentration sampling data from November 18 to 28 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:
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Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).